

Data Acquisition and Management

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ABSTRACT

Elephant Butte Irrigation District (EBID) delivers irrigation water from the Rio Grande to over 8000 constituents in Southeast New Mexico. More than 90,000 acres of water righted acres are serviced by the District's network of diversion dams, canals, laterals and drains. To operate the complex system, EBID maintains an extensive surface and groundwater monitoring network that provides near real-time data to district personnel via radio telemetry. Although historically used for system operations, EBID has recently begun using the monitoring network for water accounting, billing, and regulatory reporting purposes as well. This has brought increased scrutiny regulatory agencies, and has increased the likeliness that at some point the data will be used during legal proceedings. To help ensure the accuracy and defensibility of their data, EBID has invested in the development of a new Water Resources Information System (WRIS). As a part of this effort, Daniel B. Stephens & Associates helped EBID conduct a thorough system review and evaluation, and developed a formal data management plan. The plan describes methods and procedures associated with all phases of the data stream, including instrumentation, data acquisition, telemetry, data analysis, data QA/QC, data management, data storage, and reporting. The plan also presents recommendations for improving and expanding the monitoring network and WRIS to meet future needs. This presentation uses EBID as a case study to discuss the key elements required to ensure accurate and defensible collection, handling, and reporting of water resources data.